

WHAT IS CLAIMED IS:

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Ap } 1. A computer-readable medium having computer-executable instructions, comprising, executing a background task, receiving data indicative of a measured progress of the background task, and determining when to run the background task based on the data.

2. The computer-readable medium of claim 1 having further computer-executable instructions for suspending the background task for a suspend time, and authorizing the background task to execute.

3. The computer-readable medium having computer-executable instructions of claim 1, wherein determining when to run the background task includes comparing the measured progress of the background task against a target progress.

4. The computer-readable medium having computer-executable instructions of claim 3, wherein determining when to run the background task includes determining a suspend time for suspending the background task.

5. The computer-readable medium having computer-executable instructions of claim 4, wherein if the measured

11 progress with respect to the target progress is acceptable,
setting the suspend time to a relatively low duration.

6. The computer-readable medium having computer-executable instructions of claim 5, wherein setting the suspend time to a relatively low duration includes setting the suspend time to a minimum value.

7. The computer-readable medium having computer-executable instructions of claim 4, wherein if the measured progress with respect to the target progress is not acceptable, increasing the suspend time.

8. The computer-readable medium having computer-executable instructions of claim 7, wherein increasing the suspend time includes doubling a previous suspend time.

9. The computer-readable medium having computer-executable instructions of claim 4 wherein if the measured progress with respect to the target progress is not determinable by present data, maintaining the suspend time.

10. The computer-readable medium having computer-executable instructions of claim 1, wherein determining when

to run the background task includes determining a suspend time for suspending the background task, and wherein the suspend time is further based on a relative importance of the task.

11. The computer-readable medium having computer-executable instructions of claim 1, wherein determining when to run the background task includes statistically combining the data received with previous data.

12. The computer-readable medium of claim 1 having further computer-executable instructions for, determining a target value indicative of a target amount of work, and wherein determining when to run the background task includes comparing the measured progress of the background task against the target progress.

13. The computer-readable medium having computer-executable instructions of claim 12, wherein determining a target amount further comprises, using measured progress data to automatically calibrate the target amount.

14. The computer-readable medium having computer-executable instructions of claim 1, wherein the measured progress comprises an amount of work performed per unit time.

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15. The computer-readable medium having computer-executable instructions of claim 1, wherein the background task is executed for a limited time, and the data include a count of the number of operations performed during the limited time.

16. The computer-readable medium having computer-executable instructions of claim 15, wherein the data include the total real time taken for the operations to complete.

17. The computer-readable medium having computer-executable instructions of claim 16, wherein the data include a parameter representing the relative amount of work performed by each operation.

18. The computer-readable medium having computer-executable instructions of claim 17, wherein the background task is part of a process for recognizing duplicate files on a file system partition, and wherein the amount of work performed by each operation is an amount of data read from the partition.

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19. The computer-readable medium having computer-executable instructions of claim 1, wherein the background task performs input/output operations on a resource.

20. The computer-readable medium of claim 1 having further computer-executable instructions for prioritizing an execution of at least one other task.

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21. A system for regulating the execution of a background task, comprising, a task regulator for authorizing the background task to execute, a performance evaluator for receiving measured progress data from the background task and providing information corresponding thereto, and a computation mechanism connected to receive the information from the performance evaluator, the task regulator connected to the computation mechanism for authorizing the background task to execute based on information received from the computation mechanism.

22. The system of claim 21 wherein the information received from the computation mechanism includes a suspension time.

23. The system of claim 22 wherein the computation mechanism further determines the suspension time based on a relative importance of the task.

24. The system of claim 21 wherein the performance evaluator compares the measured progress data against target progress data.

25. The system of claim 24 further comprising a calibration mechanism for providing the target progress data.

26. The system of claim 25 wherein the calibration mechanism receives the measured progress data and statistically combines the measured progress data with previous progress data.

27. The system of claim 21 wherein the measured progress comprises an amount of work performed per unit time.

28. The system of claim 21 wherein the background process executes for a limited time, and wherein the measured progress data include a count of the number of operations performed during the limited time and a total real time taken for the operations to complete.

29. The system of claim 21 wherein the progress data further include a parameter representing a relative amount of work performed by each operation.

30. The system of claim 21 further comprising a resource accessed by the background process.

31. The system of claim 21 further comprising at least one other task having its execution regulated by the task regulator.

32. A method of executing a background process, comprising the steps of, executing a task of the background process, measuring the progress of the task, comparing the progress of the task against a target progress, and if the progress of the task is degraded relative to the target progress, increasing a delay time from a previous value thereof, and suspending for the delay time before re-executing the task.

33. The method of claim 32 wherein the progress of the task corresponds to an amount of work per unit time performed by the task.

34. The method of claim 32 wherein the background process seeks duplicate files of a file system.

35. The method of claim 32 further comprising the step of adjusting the target amount based on the progress of the task.

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